

CLAIMS

What is claimed is:

1. A modular electrical contact switch, comprising:
 - 5 an active contact assembly comprising a first end active contact module and a second end active contact module, the first and second end active contact modules having a top side, a bottom side, a first side, a second side, a front side and a back side, the first and second end active contact modules having a spring-biased contact extending from the front side, the first end active contact module first side having a
10 first coupling surface, the second end active contact module second side having a second coupling surface, the first and second end coupling surfaces adapted for removable coupling therewith; and
 - a passive contact assembly comprising a first end passive contact module and a second end passive contact module, the first and second end passive contact
15 modules having a top side, a bottom side, a first side, a second side, a front side and a back side, the first and second end passive contact modules having a passive contact adjacent the front side, the first end passive contact module first side having a first coupling surface, the second end passive contact module second side having a second coupling surface, the first and second end coupling surfaces adapted for
20 removable coupling therewith,
 - wherein contact between each active contact and passive contact closes an electrical circuit.
2. The modular contact switch of claim 1, wherein the active contact assembly
25 further comprises one or more center active contact modules having a top side, a bottom side, a first side, a second side, a front side and a back side, the center active contact module having a spring-biased contact extending from the front side, the center active contact module first side having a first coupling surface and the center active contact module second side having a second coupling surface, the first and
30 second coupling surfaces adapted for removable coupling to the first coupling surfaces, respectively, of the end modules; and

wherein the passive contact assembly further comprises one or more center passive contact modules having a top side, a bottom side, a first side, a second side, a front side and a back side, the center passive contact module having a spring-biased contact extending from the front side, the center passive contact module first
5 side having a first coupling surface and the center passive contact module second side having a second coupling surface, the first and second coupling surfaces adapted for removable coupling to the second and first coupling surfaces, respectively, of the end modules.

10 3. The modular contact switch of claim 1, wherein the first and second end active contact modules are identical with first coupling surfaces adapted to couple thereto and wherein the first and second end passive contact modules are identical with first coupling surfaces adapted to couple thereto.

15 4. The modular contact switch of claim 3, wherein the first active contact module comprises a first side comprising a coupling tab between two complimentary coupling notches adjacent the top side, and a coupling notch between two complimentary coupling tabs adjacent the bottom side, and wherein the first passive contact module comprises a first side comprising a coupling tab
20 between two complimentary coupling notches adjacent the top side, and a coupling notch between two complimentary coupling tabs adjacent the bottom side, wherein the first sides of two contact modules are adapted to be removably coupled.

5. The modular contact switch of claim 4, further comprising one or more
25 center active contact modules having a top side, a bottom side, a first side, a second side, a front side and a back side, the center active contact module having a spring-biased contact extending from the front side, the center active contact module first side comprising a coupling tab between two complimentary coupling notches adjacent the top side, and a coupling notch between two complimentary coupling
30 tabs adjacent the bottom side, the second side comprising a coupling notch between two complimentary coupling tabs adjacent the top side, and a coupling tab between

two complimentary coupling notches adjacent the bottom side, the first and second sides adapted to couple with both a second or first side of another center module, respectively, and an end module first side; and

5 further comprising one or more center passive contact modules having a top side, a bottom side, a first side, a second side, a front side and a back side, the center passive contact module having a spring-biased contact extending from the front side, the center passive contact module first side comprising a coupling tab between two complimentary coupling notches adjacent the top side, and a coupling notch between two complimentary coupling tabs adjacent the bottom side, the second side 10 comprising a coupling notch between two complimentary coupling tabs adjacent the top side; and a coupling tab between two complimentary coupling notches adjacent the bottom side, the first and second sides adapted to couple with both a second or first side of another center module, respectively, and an end module first side.

15 6. A vehicle door jamb modular contact switch for transmitting electrical current through a vehicle door jamb assembly including a door jamb of a movable door and fixed door post, comprising:

an active contact assembly comprising a plurality of active contact modules, each active contact module having a biased contact active contact and a housing 20 having one or more coupling surfaces, wherein two or more active contact modules are coupled via their coupling surfaces, the active contact assembly adapted to be mounted to the door jamb of a movable door;

a passive contact assembly comprising a plurality of passive contact modules, each passive contact module having a passive contact and a housing 25 having one or more coupling surfaces, wherein two or more active contact modules are coupled via their coupling surfaces, the passive contact assembly adapted to be mounted within the fixed-door post, the movable door and the fixed-door post in cooperating relationship wherein the biased contact active contacts of the plurality of active contact modules are in cooperative engagement with the passive contacts 30 of the plurality of passive contact modules and operative to mate therewith to form a closed circuit when the vehicle door assumes a closed position,

7. The modular contact switch of claim 6, wherein the active and passive contact module coupling surfaces comprises one or more tabs and corresponding notches.

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8. The modular contact switch of claim 6, wherein the active and passive contact module coupling surfaces comprise one or more protruding male components and/or one or more interlocking female depressions adapted for cooperative engagement with one or more protruding male components.

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9. The modular contact switch of claim 6, wherein the plurality of active and passive contact modules comprise a first end contact module, a second end contact module, and a center contact module,

the first end contact module comprising a housing having a first coupling surface comprising a protruding male component;

the second end contact module comprising a housing having a second surface comprising a grooved female component,

and the center contact module comprising a housing having a first coupling surface comprising a protruding male component, and a second surface opposite the first surface comprising a grooved female component, the protruding male component and the grooved female component adapted to slidingly couple.

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10. The modular contact switch of claim 9, wherein the protruding male component is a tongue running longitudinal to the coupling side, wherein the grooved female component is a groove running longitudinal to the coupling side.

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11. The modular contact switch of claim 9, wherein the active and passive contact module coupling surfaces comprise one or more protruding male components and/or one or more interlocking female depressions adapted for cooperative engagement with one or more protruding male components.

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